

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): July 16, 2024



NEUROBO PHARMACEUTICALS, INC.

(Exact name of Registrant as Specified in Its Charter)

Delaware
(State or other jurisdiction
of incorporation)

**545 Concord Avenue, Suite 210
Cambridge, Massachusetts**

(Address of principal executive offices)

001-37809
(Commission
File Number)

47-2389984
(IRS Employer
Identification No.)

02138
(Zip Code)

(857) 702-9600

(Registrant's telephone number, including area code)

Not applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.001 per share	NRBO	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 7.01 Regulation FD Disclosure.

On July 16, 2024, NeuroBo Pharmaceuticals, Inc. (the “Company”) posted an updated corporate presentation to its website at <https://www.neuropharma.com/events-presentations/presentations>, which the Company may use from time to time in communications or conferences. A copy of the corporate presentation is furnished as Exhibit 99.1 to this Current Report on Form 8-K (this “Report”).

Exhibit 99.1 hereto contains forward-looking statements within the meaning of the federal securities laws. These forward-looking statements are based on current expectations and are not guarantees of future performance. Further, the forward-looking statements are subject to the limitations listed in Exhibit 99.1 and in the other reports of the Company filed with the Securities and Exchange Commission, including that actual events or results may differ materially from those in the forward-looking statements.

The information in this Report, including Exhibit 99.1 hereto, is furnished pursuant to Item 7.01 and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that Section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing. The Company’s submission of this Report shall not be deemed an admission as to the materiality of any information required to be disclosed solely to satisfy the requirements of Regulation FD.

Information contained on or accessible through any website reference in the press release is not part of, or incorporated by reference in, this Report, and the inclusion of such website addresses in this Report by incorporation by reference of the press release is as inactive textual references only.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit Number	Exhibit Description
99.1	Corporate Presentation, dated July 2024.
104	Cover Page Interactive Data File (embedded within Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

NEUROBO PHARMACEUTICALS, INC.

Date: July 16, 2024

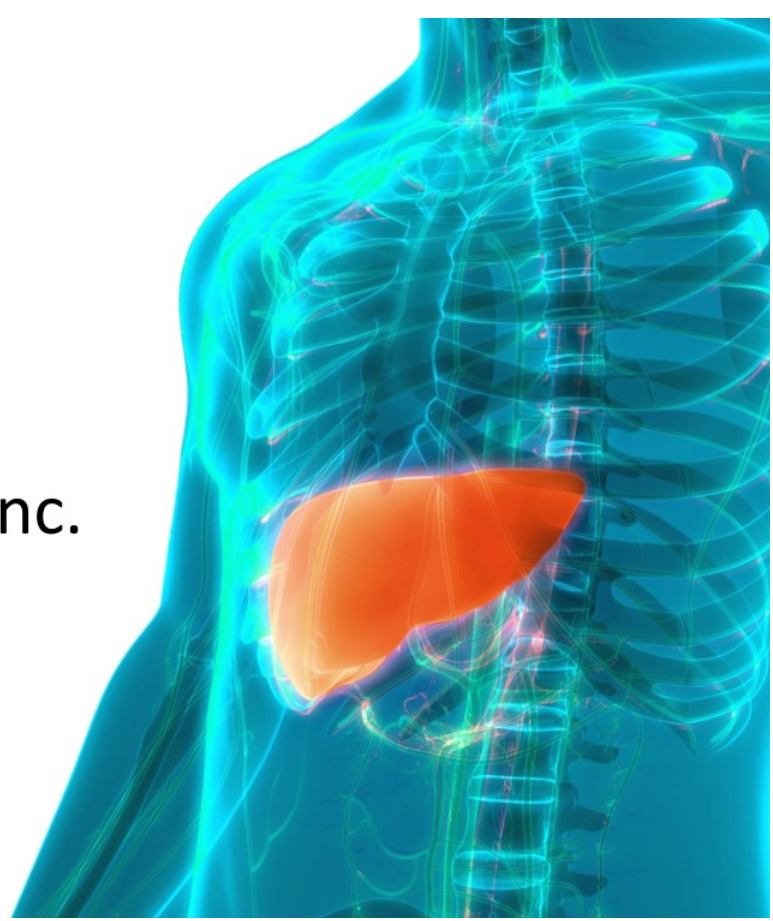
By: /s/ Hyung Heon Kim
Hyung Heon Kim
President and Chief Executive Officer



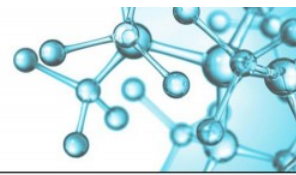
NeuroBo Pharmaceuticals, Inc.

July 2024

NASDAQ: NRBO



Forward-Looking Statements

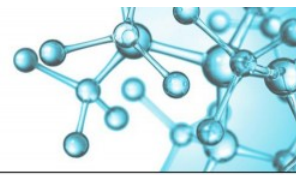


This presentation may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include all statements that do not relate solely to historical or current facts and can be identified by the use of words such as “believes”, “expects”, “anticipates”, “may”, “will”, “should”, “seeks”, “approximately”, “intends”, “projects”, “plans”, “estimates” or the negative of these words or other comparable terminology (as well as other words or expressions referencing future events, conditions or circumstances). Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. These forward-looking statements include statements regarding the market size and potential growth opportunities of our current and future product candidates, capital requirements and use of proceeds, clinical development activities, the timeline for, and results of, clinical trials, regulatory submissions, and potential regulatory approval and commercialization of our current and future product candidates. Many factors could cause actual future events to differ materially from the forward-looking statements in this presentation, including, without limitation, those risks associated with our ability to execute on our commercial strategy; the timeline for regulatory submissions; ability to obtain regulatory approval through the development steps of our current and future product candidates, the ability to realize the benefits of the license agreement with Dong-A ST Co. Ltd., including the impact on future financial and operating results of NeuroBo; the cooperation of our contract manufacturers, clinical study partners and others involved in the development of our current and future product candidates; potential negative interactions between our product candidates and any other products with which they are combined for treatment; our ability to initiate and complete clinical trials on a timely basis; our ability to recruit subjects for our clinical trials; whether we receive results from our clinical trials that are consistent with the results of pre-clinical and previous clinical trials; impact of costs related to the license agreement, known and unknown, including costs of any litigation or regulatory actions relating to the license agreement; effects of changes in applicable laws or regulations; whether we are able to maintain compliance with Nasdaq listing requirements; and effects of changes to our stock price on the terms of the license agreement and any future fundraising. These forward-looking statements are based on information currently available to us and our current plans or expectations and are subject to a number of known and unknown uncertainties, risks and other important factors that may cause our actual results, performance or achievements expressed or implied by the forward-looking statements. These and other important factors are described in detail in the “Risk Factors” section of our Annual Report on Form 10-K for the year ended December 31, 2023 and our other filings with the Securities and Exchange Commission.

While we may elect to update such forward-looking statements at some point in the future, except as required by law, we disclaim any obligation to do so, even if subsequent events cause our views to change. Although we believe the expectations reflected in such forward-looking statements are reasonable, we can give no assurance that such expectations will prove to be correct. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to this presentation.

This presentation also may contain estimates and other statistical data made by independent parties and by us relating to market size and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

Strong Leadership Team



Executive Management



Hyung Heon Kim, Chief Executive Officer

- 20+ years of experience in M&A, financing and corporate governance
- 10+ years of licensing, M&A and compliance with Dong-A Group
- Former General Counsel/SVP at Dong-A ST and Dong-A Socio Group
- BA Soongsil University, JD Washington University School of Law



Marshall H. Woodworth, Chief Financial Officer

- 35+ years of financial experience
- 20+ years working with life science investors and analysts
- CFO of Nevakar Inc., Braeburn Pharmaceuticals Inc., Aerocrine AB and Furiex Pharmaceuticals Inc.
- BS University of Maryland, MBA Indiana University

Non-Executive Management



Mi-Kyung Kim, Ph.D., RPh, Chief Scientific Officer

- 25+ years in drug discovery research at Dong-A ST
- Specialized in diabetes, obesity, MASH, immune-mediated diseases
- Ph.D., RPh, College of Pharmacy, Ewha Womans University



Chris Fang, MD, Advisor/Consulting Chief Medical Officer

- 20+ years of experience in clinical development, R&D and medical affairs
- Career focused on obesity, MASH, diabetes and other indications
- Held key roles at Eli Lilly, IQVIA, Acer Health and Johnson & Johnson
- BA UCLA, Master of Health Science John Hopkins, MD Cornell, MBA Wharton

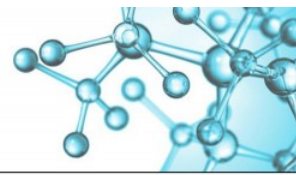


Robert Homolka, SVP Clinical Operations

- 35+ years in pharmaceutical and biotech development
- Sr. director of clinical operations in Adiso Therapeutics
- Director of clinical operations at Shire/Takeda pharmaceuticals
- Director of experimental trial management at AstraZeneca



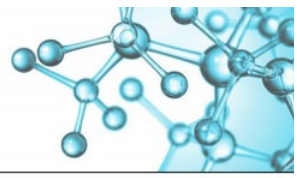
Compelling Investment Opportunity



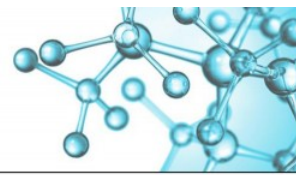
Targeting **Obesity and MASH** with a Pipeline of **Next Generation Therapeutics**

- Aiming to increase Shareholder Value through *Multiple, Near-Term, Value Creating Milestones*
 - **DA-1726**
 - ✓ Ongoing Phase 1 trial for the treatment of obesity
 - Part 1 (SAD) data readout expected in Q3 2024 and Part 2 (MAD) data readout in Q1 2025
 - **DA-1241**
 - ✓ Ongoing Phase 2a in subjects with presumed MASH
 - Top-line data readout expected in Q4 2024
- Backed by Strategic Partner and Major Shareholder, Dong-A ST
- Well capitalized with approximately *\$16 million in Cash at the end of Q1 2024* – not including aggregate gross proceeds received of \$20 million at the closing of a June 2024 equity financing. Additional \$50 million in aggregate gross proceeds may be received if all milestone-based warrants are fully exercised.

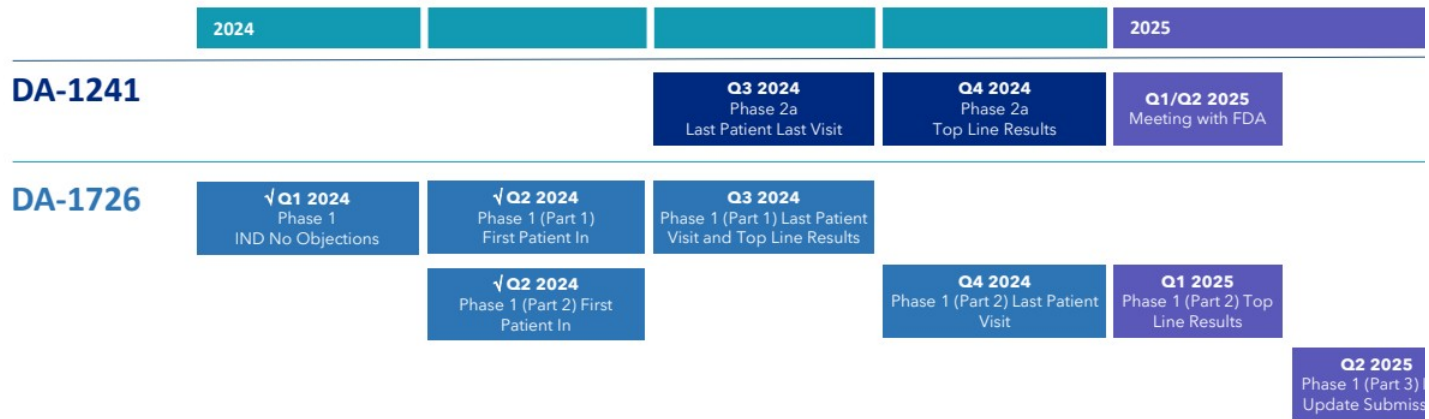
Pipeline



Multiple Near-Term Milestones: Targeting to Increase Shareholder Value



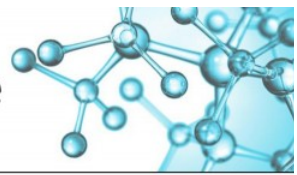
Investments in the **current DA-1241 Phase 2a** and **DA-1726 Phase 1** have the potential for significant returns in the event of clinical and regulatory success



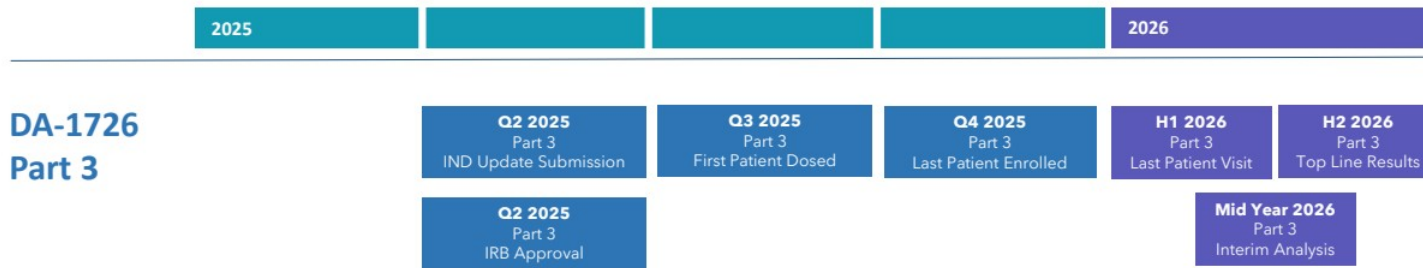
* These milestones assume regulatory and clinical success, which is not guaranteed



DA-1726: Upcoming Phase 1 Part 3 Trial in Obesity Timeline



Phase 1 Part 3 will assess total weight loss at 24 weeks, exploring maximum titratable dose and dietary changes

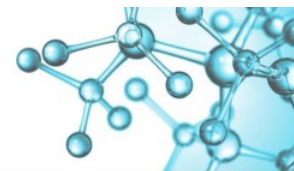


DA-1726 Part 3

* These milestones assume regulatory and clinical success, which is not guaranteed



DA-1726: Upcoming Phase 1 Part 3 to Evaluate Early Proof of Concept and Maximum Titratable Dose



Study Objectives

- *Exploratory efficacy and early proof of concept after 24-weeks of treatment*
- *Gain an understanding of drug titration and dosing including time to maximum-tolerated dose and individualized maximum-tolerated dose*

Efficacy Endpoints

- *Evaluate total weight loss at 24 weeks* – change in baseline at maximum-tolerated individualized dose to the end of treatment period
- *Explore type of weight loss* - lean muscle mass versus fat loss
- *Explore dietary changes* including caloric intake and composition
- *Evaluate durability of weight loss* after discontinuation

Study Design	
Study Overview	<ul style="list-style-type: none">▪ A multicenter, randomized, double-blind, placebo-controlled, Phase 1 clinical trial to evaluate the efficacy and safety of DA-1726 in obese, otherwise healthy subjects
Additional Endpoints	<ul style="list-style-type: none">▪ Biomarker changes (PK, PD)▪ Longer term safety (i.e., AEs, Lab, ECG)
Study Design	<ul style="list-style-type: none">▪ 3 Period design<ul style="list-style-type: none">• Titration Period – up to 12 weeks• Treatment Period – at least 12 weeks at individualized maximum titratable dose• Follow-up Period – 4 weeks
No. of Subjects and Location	<ul style="list-style-type: none">▪ Approximately 80 subjects randomized in a 4:1 ratio of DA-1726 or Placebo at multiple centers in the United States
Enrollment (estimated)	<ul style="list-style-type: none">▪ FPFV Q3 2025▪ LPLV 1H 2026

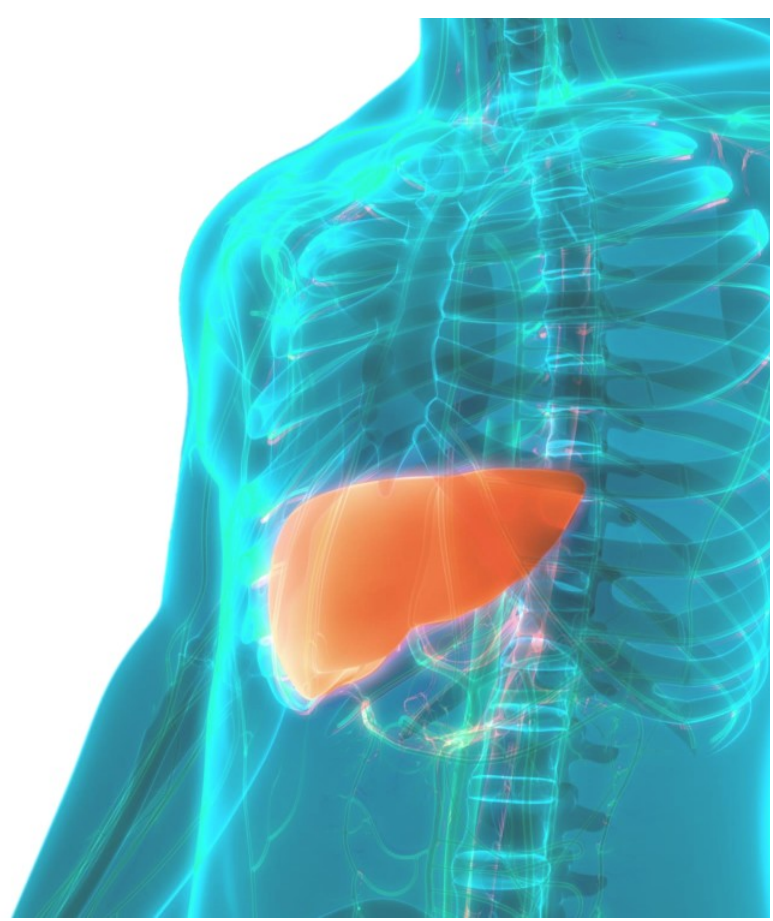
Notes: FPFV (First Patient First Visit); LPLV (Last Patient Last Visit); PK (Pharmacokinetic); PD (Pharmacodynamic)



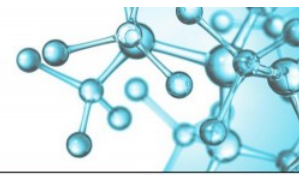


DA-1726

A Novel **GLP1R/GCGR**
Dual Agonist for the
Treatment of **Obesity**



DA-1726: Indication - Obesity - Competitive Differentiation

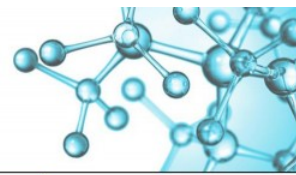


	Pemvidutide	DA-1726	Mazdutide	Survodutide	Semaglutide	Tirzepatide
Developer	Altimmune	NeuroBo	Innovent Biologics Lilly	Boehringer Ingelheim	Novo Nordisk	Lilly
Status	Phase 3 ready	Phase 1	Phase 3 (China, 9mg) Phase 2 (USA) NDA in China for 6mg	Phase 3	Marketed (Obesity/Wegovy®) Marketed (T2D/Ozempic®)	Marketed (Obesity/Zepbound®) Marketed (T2D/Mounitoro®)
Action	GLP-1R/GCGR (Glucagon receptor) (1:1) * dual agonist	GLP-1R/GCGR (3:1) * dual agonist	GLP-1R/GCGR (Undisclosed) * dual agonist	GLP-1R/GCGR (8:1) * dual agonist	GLP-1R agonist (NA)	GLP-1R/GIPR (Unknown) dual agonist
Dosage	once weekly, injection	Exploratory dosing in Phase 1	once weekly, injection	once weekly, injection	once weekly, injection	once weekly, injection
Efficacy in Human	Body weight loss, 15.6% @ 48-week (high dose 2.4mg)	Exploratory efficacy in Phase 1	Body weight loss, 18.6% @ 48-week (placebo adjusted, 9mg)	Body weight loss, 18.7% @ 46-week	Body weight loss, 14.8% @ 68-week	Body weight loss, 20.9% @ 72-week
Safety in Human	Nausea, vomiting, diarrhea, etc. Discontinuations due to adverse events 19.6% (high dose 2.4mg)	Exploratory safety in Phase 1	Nausea, diarrhea, vomiting, abdominal distension. No discontinued treatment due to adverse events during 9mg Phase 2	Nausea, vomiting, diarrhea, constipation. Treatment discontinuations due to AEs: 24.6% (BI: due to rapid dose escalation)	Nausea, diarrhea, vomiting, constipation, abdominal pain. Treatment discontinuations due to AEs: 7% for 2.4mg	Nausea, diarrhea, decreased appetite, constipation. Treatment discontinuations due to AEs: 6.2%
Differentiation		<ul style="list-style-type: none"> Weight loss similar or better as compared to semaglutide Better tolerability due to balance approach as compared to semaglutide 				

Note : Above GLP-1R/GCGR relative ratio are based on publicly available data and internal research data. These results may vary depending on methodologies used for calculation.

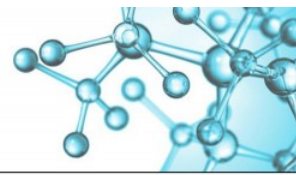


DA-1726: Potentially Best in Class Based on Key Attributes From Non-Clinical Studies



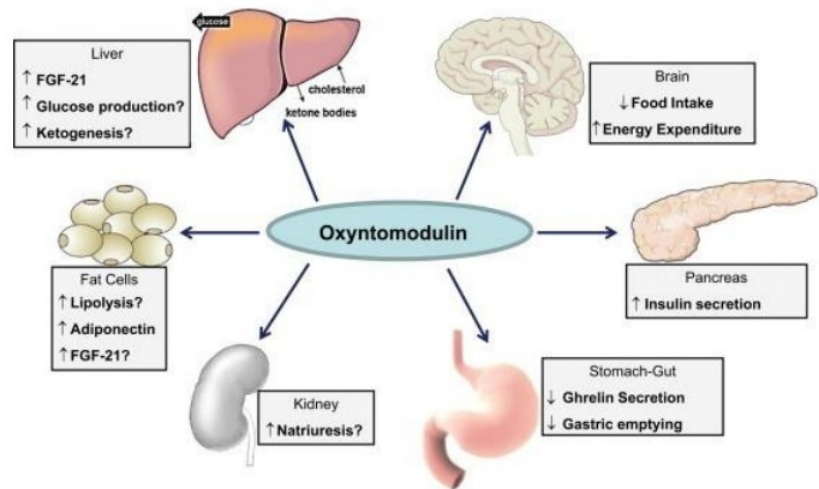
Attribute	DA-1726	Survodutide	Semaglutide	Tirzepatide
Change in Body Weight	Similar or Better Than Competition	DA-1726 ~7% More Body Weight Loss while Consuming More Calories 2024 84th ADA Poster 2058-LB	DA-1726 ~8% More Body Weight Loss while Consuming ~8% More Calories 2023 83rd ADA Poster 1676-P	DA-1726 Similar Body Weight Loss while Consuming ~20% More Calories 2023 83rd ADA Poster 1668-P
Tolerability / Compliance: Drop Out Rate and AE's	Similar or Better Than Competition <i>To be confirmed in Phase 1 Part 3</i>	DA-1726 ~7% More Body Weight Loss 2024 84th ADA Poster 2058-LB	DA-1726 ~8% More Body Weight Loss while Consuming ~8% More Calories 2023 83rd ADA Poster 1676-P	DA-1726 Similar Body Weight Loss while Consuming ~20% More Calories 2023 83rd ADA Poster 1668-P
Glucose Control & Insulin Sensitivity: HbA1c, Fasting Plasma Glucose, Fasting Plasma Insulin	Similar or Better Than Competition	DA-1726 effectively lowered T-CHO, TG and glucose levels 2024 84th ADA Poster 2058-LB	DA-1726 better HbA1c and Glycemic Control 2022 82nd ADA Poster 1403-P 2023 83rd ADA Poster 1676-P	DA-1726 Better Glucose Lowering HF-Obese mice 2023 83rd ADA Poster 1668-P
Body Composition: Fat:Lean Mass Loss	Better Than Competition	DA-1726 demonstrated superior body fat mass reduction and relative lean body mass preservation 2024 84th ADA Poster 2058-LB	DA-1726 better expression of thermogenic genes in white adipose tissue 2022 82nd ADA Poster 1403-P 2023 83rd ADA Poster 1676-P	Not Available
MASH/NAFLD	Better Than Competition	Not Available	DA-1726 better NAFLD activity score and fibrosis resolution 2022 82nd ADA Poster 1333-P	Not Available
Weight Loss Metrics: BMI, Waist Circumference	Similar or Better Than Competition <i>To be confirmed in Phase 1 Part 3</i>	Not Available	Not Available	Not Available
Cardiovascular: Systolic & Diastolic Blood Pressure, Cholesterol	TBD <i>To be confirmed in CV Outcome Trial</i>	Not Available	Not Available	Not Available

DA-1726: Mechanism of Action



DA-1726 is a **novel oxyntomodulin analogue** functioning as a GLP1R/GCGR dual agonist for **the treatment of obesity**

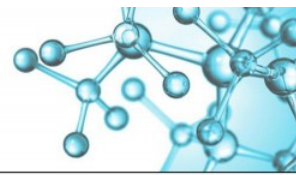
- **Oxyntomodulin**
 - a gut hormone released from intestinal L-cells after meal ingestion resulting in dual agonism of the GLP-1 receptor and glucagon receptor
- **Reduces food intake (GLP-1 R)** and **increases energy expenditure (GCGR)** in humans, potentially resulting in superior body weight loss



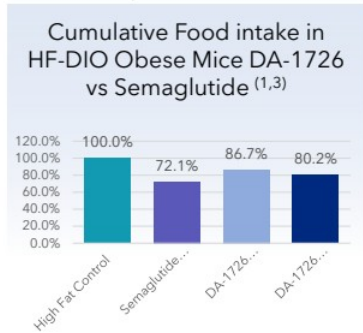
Physiological effects of oxyntomodulin⁽¹⁾

Notes: GLP1R/GCGR (Glucagon-Like Peptide 1 Receptor/Glucagon Receptor);
GLP-1 (Glucagon-Like Peptide 1)
1. Pocai A. Mol Metab.2014;3:241-51

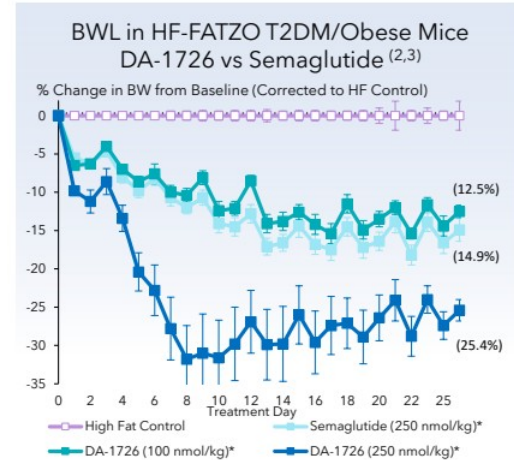
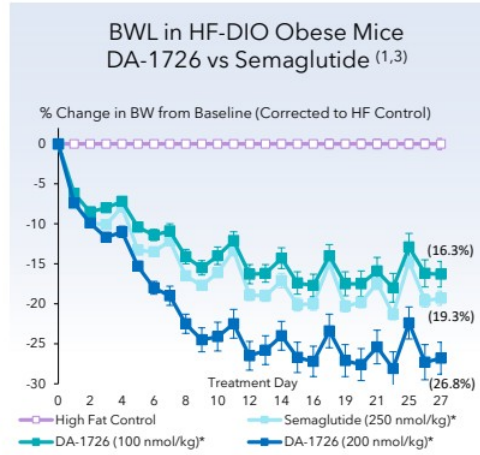
DA-1726: Therapeutic Potential in Obesity⁽¹⁻³⁾ — Semaglutide Comparison



DA-1726 outperformed Semaglutide (Wegovy®), a GLP-1 agonist, in mouse models of obesity*



Weight loss observed from DA-1726 is attributed to reduced food intake via GLP1R and increased energy expenditure via the GCGR



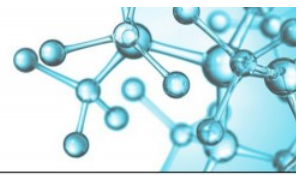
*Statistically significant compared to control

Notes: GLP1R/GCGR (Glucagon-Like Peptide 1 Receptor/ Glucagon Receptor); HF-DIO (High Fat-Diet Induced Obesity); GLP-1 (Glucagon-Like Peptide 1).

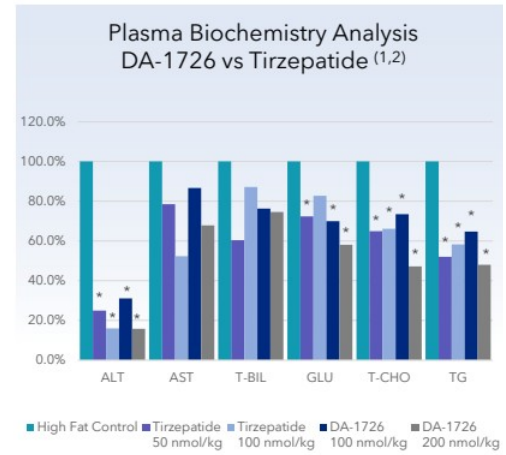
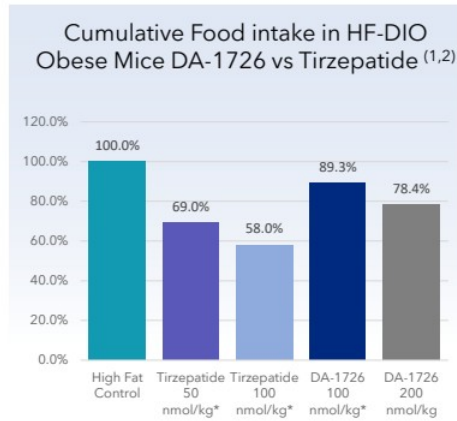
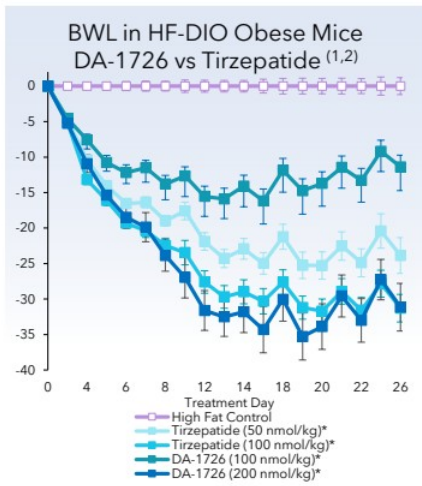
1. Dong-A Study Report 104561. All treatments given as twice weekly injections.
2. Dong-A Study Report 104455. All treatments given every 3 days as injections.
3. Kim TH et al. 82nd Meeting of the American Diabetes Association. 2022; Abstract 1403-P.



DA-1726: Therapeutic Potential in Obesity ^(1,2) — Tirzepatide Comparison



DA-1726 shows similar weight loss while consuming more food compared to Tirzepatide (Mounjaro®)



Weight loss is attributed to reduced food intake and increased energy expenditure

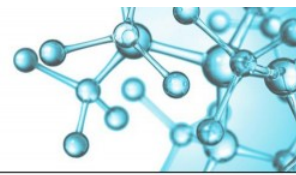
Notes: HF-DIO (High Fat-Diet Induced Obesity); BWL (Body Weight Loss)

1. Dong-A Study Report 105497. All treatments given as twice weekly injections.

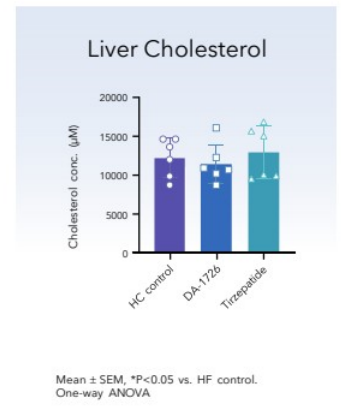
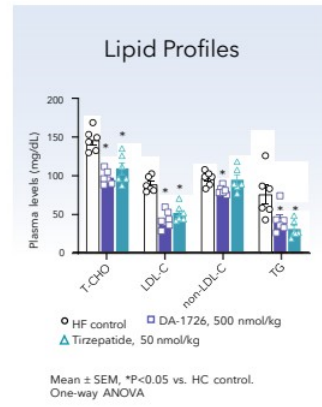
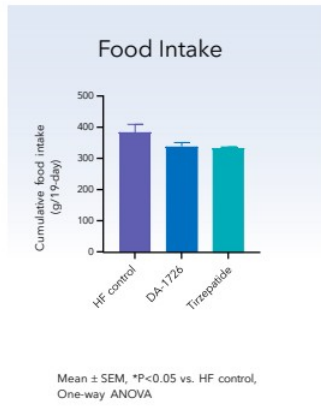
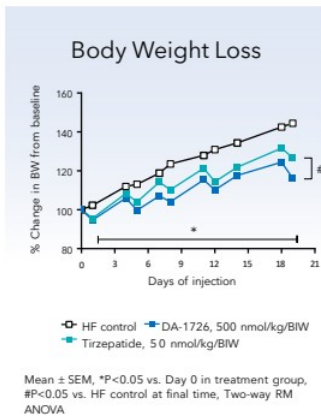
2. Jung I-H et al. 83rd Meeting of the American Diabetes Association. 2023; Abstract 1668-P.



DA-1726: Comparative Study with Tirzepatide on Lipid-Lowering

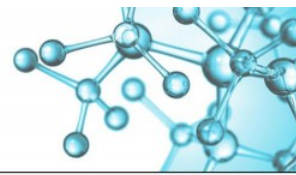


DA-1726 was more effective in regulating lipid metabolism and suppressing weight gain, even though the hyperlipidemic rats had a similar food intake to those taking Tirzepatide

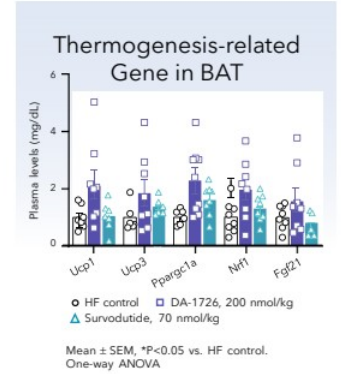
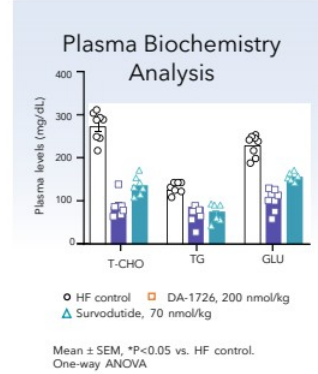
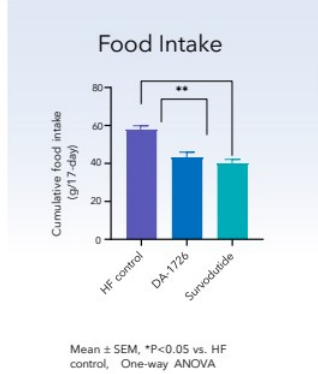
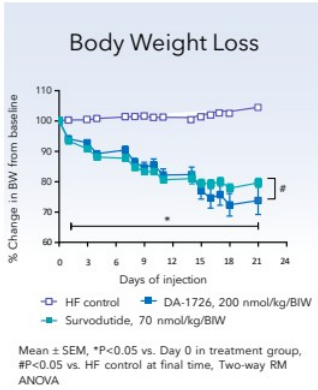


Notes: hyperlipidemic rat (high-cholesterol diet induced wistar rat)
 1. Tae-Hyoung Kim et al. 84th Meeting of the American Diabetes Association. 2024; Abstract 2058-LB.
 2. All treatments given as twice weekly injections for three weeks.

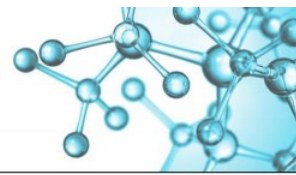
DA-1726: Comparative Study with Survodutide on Weight Loss & Lipid-Lowering



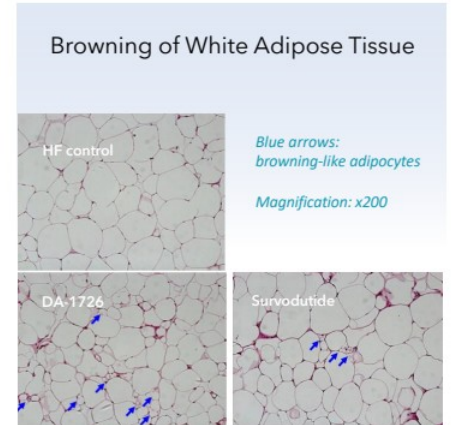
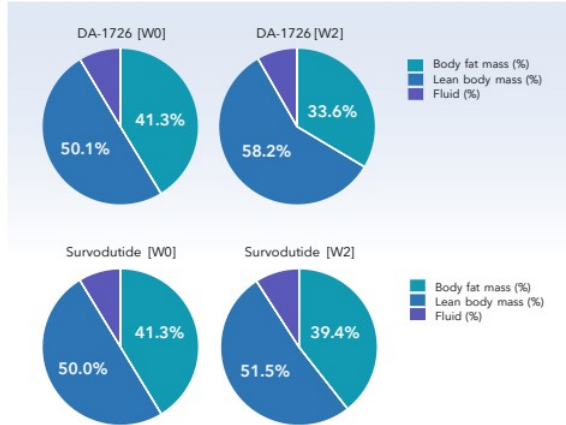
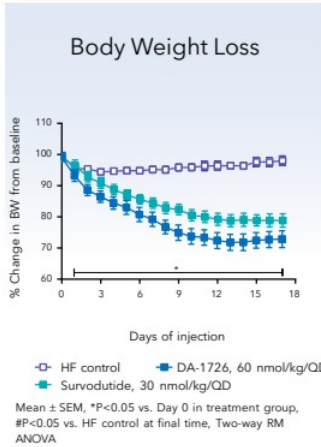
- DA-1726 demonstrated superior weight loss efficacy compared to Survodutide in HF-DIO mice despite more food consumption
- DA-1726 effectively lowered T-CHO, TG, and glucose levels while significantly increasing the expression of EE-related genes in brown adipose tissue



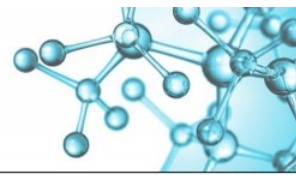
Notes: HF-DIO (High Fat-Diet Induced Obesity), EE (energy expenditure), BAT (brown adipose tissue)
 1. Tae-Hyoung Kim et al. 84th Meeting of the American Diabetes Association. 2024; Abstract 2058-LB.
 2. All treatments given as twice weekly injections for three weeks.



- DA-1726 demonstrated superior weight loss efficacy compared to Survodutide in HF-DIO mice under similar dietary intake conditions
- DA-1726 demonstrated superior body fat mass reduction and lean body mass relative preservation compared to Survodutide
- The increase in beige or brown adipose-like cells in white adipose tissue by DA-1726 supports the mechanism of enhanced energy expenditure



Notes: HF-DIO (High Fat-Diet Induced Obesity), EE (energy expenditure), BAT (brown adipose tissue)
 1. Tae-Hyoung Kim et al. 84th Meeting of the American Diabetes Association. 2024; Abstract 2058-LB.
 2. All treatments given daily for three weeks.
 3. Browning of white adipose tissue analyzed using epididymal fat.

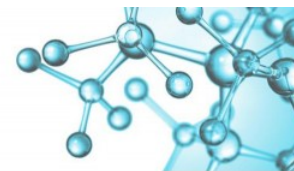


Rationale for study

- *Gain a robust understanding of safety, tolerability of various dose levels in humans*
- *Superior weight loss* compared with the pair-fed group, indicating much of the weight loss was attributed to reduced food intake via activation of GLP-1
- *Superior to both the pair-fed and control groups* in energy expenditure (secondary to glucagon activation)
- *Potentially superior weight loss compared to approved obesity products*

Phase I	
Study overview	<ul style="list-style-type: none">▪ 2-part study<ul style="list-style-type: none">• Part 1—Single ascending dose study• Part 2—Multiple ascending dose study
Population	<ul style="list-style-type: none">▪ Obese otherwise healthy
No. of Subjects	<ul style="list-style-type: none">▪ Approximately 100 subjects for both studies
Location	<ul style="list-style-type: none">▪ United States

Notes: MAD (Multiple Ascending Dose); SAD (Single Ascending Dose); PK (Pharmacokinetic); PD (Pharmacodynamic); FPFV (First Patient First Visit); LPLV (Last Patient Last Visit).



Study Objectives

- *Exploratory efficacy and early proof of concept after 24-weeks of treatment*
- *Gain an understanding of drug titration and dosing including time to maximum-tolerated dose and individualized maximum-tolerated dose*

Efficacy Endpoints

- *Evaluate total weight loss at 24 weeks* – change in baseline at maximum-tolerated individualized dose to the end of treatment period
- *Explore type of weight loss* - lean muscle mass versus fat loss
- *Explore dietary changes* including caloric intake and composition
- *Evaluate durability of weight loss* after discontinuation

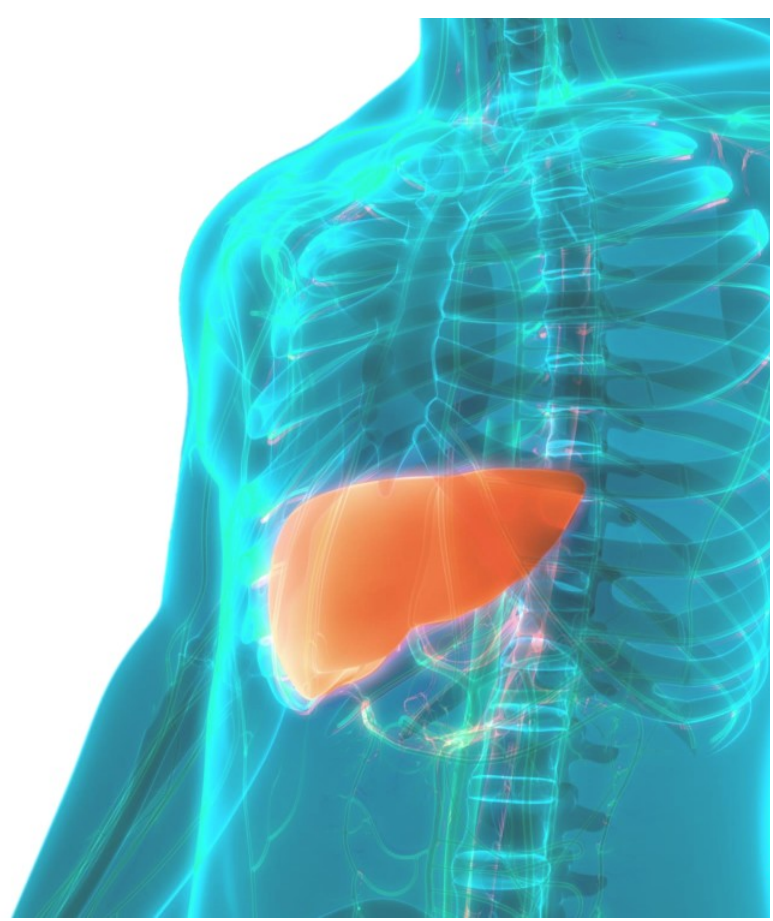
Study Design	
Study Overview	<ul style="list-style-type: none"> ▪ A multicenter, randomized, double-blind, placebo-controlled, Phase 1 clinical trial to evaluate the efficacy and safety of DA-1726 in obese, otherwise healthy subjects
Additional Endpoints	<ul style="list-style-type: none"> ▪ Biomarker changes (PK, PD) ▪ Longer term safety (i.e., AEs, Lab, ECG)
Study Design	<ul style="list-style-type: none"> ▪ 3 Period design <ul style="list-style-type: none"> • Titration Period – up to 12 weeks • Treatment Period – at least 12 weeks at individualized maximum titratable dose • Follow-up Period – 4 weeks
No. of Subjects and Location	<ul style="list-style-type: none"> ▪ Approximately 80 subjects randomized in a 4:1 ratio of DA-1726 or Placebo at multiple centers in the United States
Enrollment (estimated)	<ul style="list-style-type: none"> ▪ FPFV Q3 2025 ▪ LPLV 1H 2026

Notes: FPFV (First Patient First Visit); LPLV (Last Patient Last Visit); PK (Pharmacokinetic); PD (Pharmacodynamic)

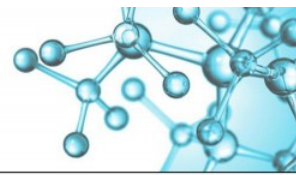


DA-1241

Orally Available, Potential
First-in-Class GPR119 Agonist for
the Treatment of **MASH**



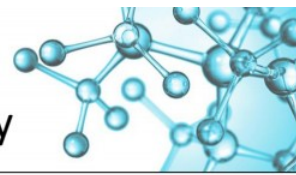
DA-1241: Competitive Differentiation



	Resmetirom	DA-1241
Developer	Madrigal	NeuroBo
Indication	MASH	MASH
Status	Approved	Phase 2
Action	THR (Thyroid hormone receptor) β agonist	GPR119 agonist
Dosage	Once daily, oral	Once daily, oral
Efficacy in Human	MASH resolution with more than a 2-point reduction in MASH Activity Score (100mg: 30%, 80mg: 26%, Placebo: 10%) ⁽¹⁾	Effective in treating or modifying the progression of MASH, NAFLD Activity Score and Biomarkers
Safety in Human	Mild/transient diarrhea, mild nausea ⁽¹⁾	Headache, somnolence, fatigue, hypoglycemia, and cold sweat (reported in Phase I studies)
Differentiation	The first FDA approved treatment for MASH	<ol style="list-style-type: none"> 1. Unique mechanism of action. Works on inflammation associated with MASH 2. Can be used as a monotherapy or in combination with other therapies 3. Synergistic effect(s) when co-administered with a DPP4 or GLP1R agonist

1. <https://ir.madrigalpharma.com/news-releases/news-release-details/madrigal-announces-positive-topline-results-pivotal-phase-3>

DA-1241 Effect on Pathogenesis in **MASH** as a Monotherapy



GPR119 activation:

Monocytes and macrophages

- Macrophage activation
- Monocyte recruitment
- Macrophage differentiation

→ *Reduction in hepatic and systemic inflammation*

Hepatic stellate cells

- Stellate cell activation

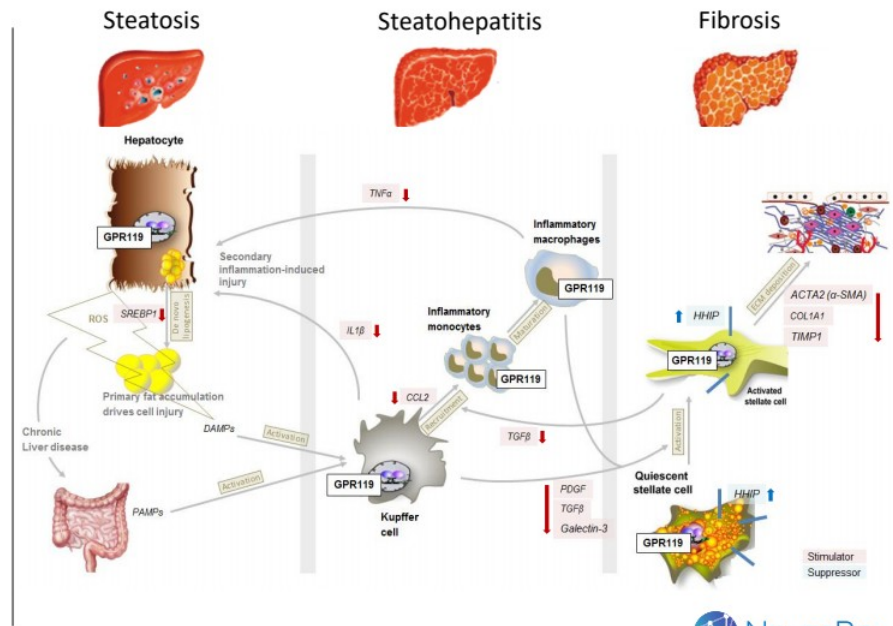
→ *Reduce hepatic fibrogenesis*

Hepatocytes and intestinal L-cells

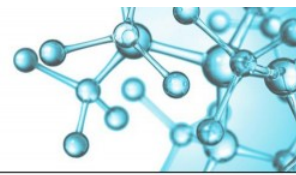
- *De novo* lipogenesis
- Dietary fat absorption

→ *Reduce hepatic steatosis*

DAMPs: danger-associated molecular patterns
 PAMPs: pathogen-associated molecular patterns
 ECM: extracellular matrix

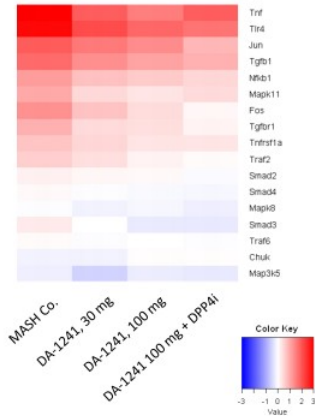


GPR119 in MASH Pathogenesis when Co-Administered with Other Therapies

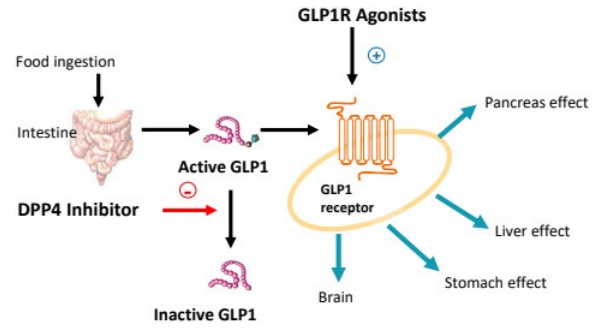
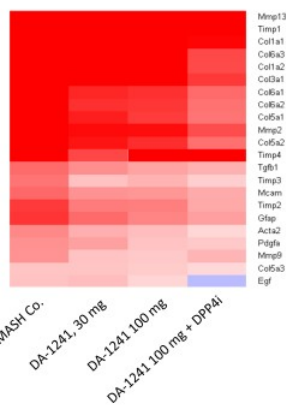


- **Effectively decreased hepatic inflammation**
- **Reduced systemic inflammation** and fibrosis biomarkers
- **Reduced hepatic lipid and collagen deposition** in the liver of MASH mice

Changes of 17 **inflammation signaling-related** genes



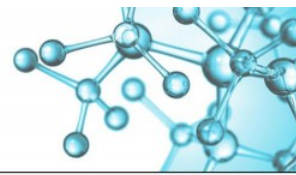
Changes of 22 **stellate cell activation-related** genes



Activation of GLP1 Receptor Effects

- **Pancreas**
 - Increase proliferation of beta cells
 - Prevent the apoptosis of beta cells
 - Increase insulin biosynthesis
 - Increase insulin secretion
 - Increase insulin biosynthesis
- **Liver**
 - Decrease glucose production
- **Stomach**
 - Decrease gastric emptying
- **Brain**
 - Decrease appetite

DA-1241: Ongoing Phase 2a in MASH



Support use as a monotherapy

- DA-1241 modified the *progression of MASH* in Ob-MASH mice
- Exploring improved *biomarkers (CCL2, TNF α , and TIMP1), liver fat content, and stiffness* as measured by Fibroscan and MRI

Exploring Co-Administration with a DPP4 inhibitor

- *Identify ability to effectively decreased hepatic inflammation*
- *Explore ability to reduce systemic inflammation* and fibrosis biomarkers
- *Reduced hepatic lipid and collagen deposition* in Ob-MASH mice

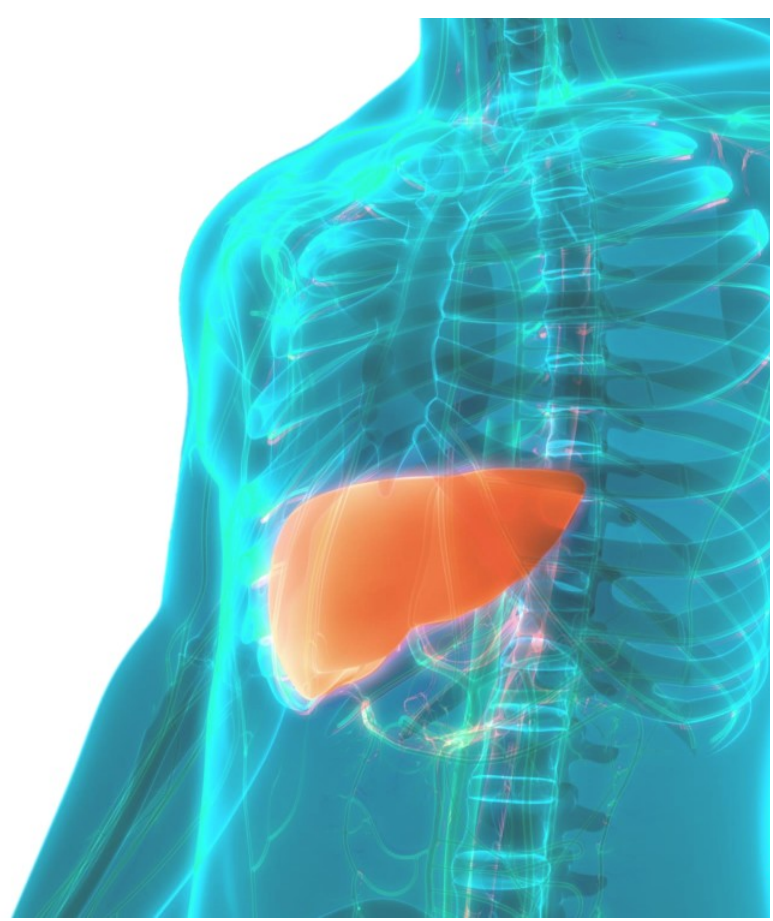
Study Design	
Study Overview	<ul style="list-style-type: none">▪ A multicenter, randomized, double-blind, placebo-controlled, parallel, Phase 2a clinical trial to evaluate the efficacy and safety of DA-1241 in subjects with presumed non-alcoholic steatohepatitis
Primary Endpoint	<ul style="list-style-type: none">▪ ALT change from baseline in alanine transaminase
Study Design	<ul style="list-style-type: none">▪ 2 Part study<ul style="list-style-type: none">• Part 1: DA-1241 50mg, DA-1241 100mg, Placebo• Part 2: DA-1241 100mg + Sitagliptin 100mg, Placebo
No. of Subjects	<ul style="list-style-type: none">▪ Approximately 90 subjects with presumed MASH
Location	<ul style="list-style-type: none">▪ Approximately 25 centers in the United States
Enrollment (planned)	<ul style="list-style-type: none">▪ FPI September 2023▪ LPLV Q3

Notes: FPFV (First Patient First Visit); LPO (Last Patient Last Visit)

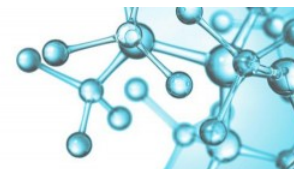




Financials and Capitalization



Cash Balance and Capitalization Table



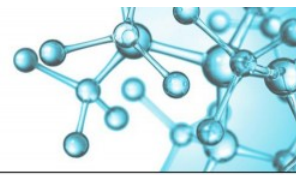
Projected Cash Balance	As of March 31, 2024
Cash ⁽¹⁾	\$16.0 million
Debt	None

Projected Capitalization Table as of March 31, 2024	Common Stock Equivalents
Common Stock ⁽¹⁾	4,906,002
Warrants (WAEP \$145.54) ⁽¹⁾⁽²⁾⁽³⁾	203,914
Options (WAEP \$398.30)	4,700
Restricted Stock Units	194,954
Common Stock Shares Available for Issuance under Equity Incentive Plans	416,227
Fully Diluted	5,725,797

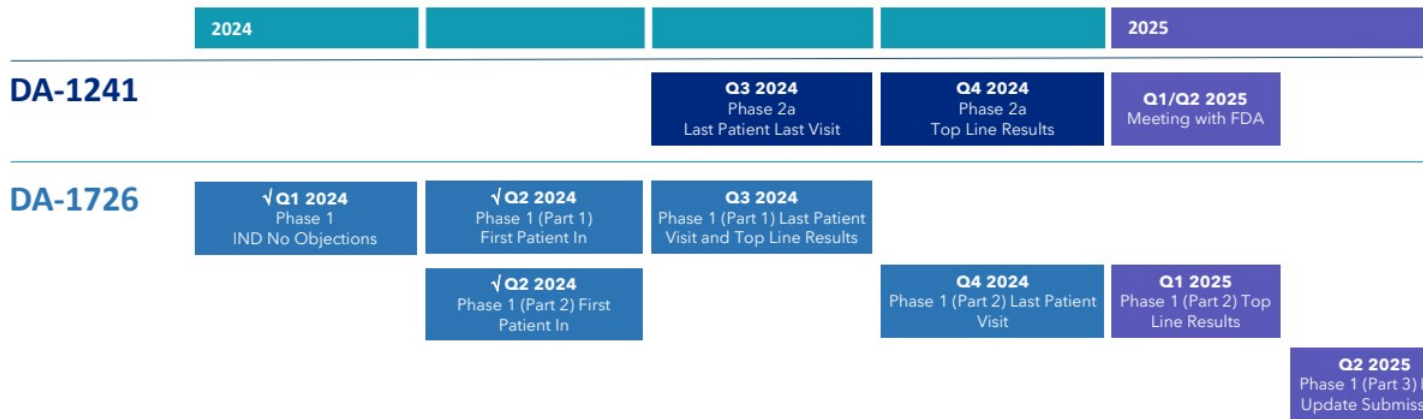
- From the completed equity financing in June 2024, (i) received aggregate gross proceeds of \$20.0 million (before deducting the placement agent's fees and other offering expenses), (ii) issued 3,307,889 shares of common stock, (iii) issued pre-funded warrants to purchase up to 1,781,171 shares of common stock at an exercise price of \$0.001 per share, and (iv) issued common warrants to purchase up to 12,849,878 shares of common stock at a WAEP of \$3.94 per share. These are not reflected in the Common Stock Equivalents number shown.
- Includes Series B warrants from 2022 financing to purchase 177,938 shares of common stock with an assumed exercise price of \$0.00 per share.
- No ratchets, price resets or anti-dilution provisions.



Multiple Near-Term Milestones: Targeting to Increase Shareholder Value



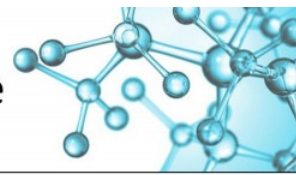
Investments in the **current DA-1241 Phase 2a** and **DA-1726 Phase 1** have the potential for significant returns in the event of clinical and regulatory success



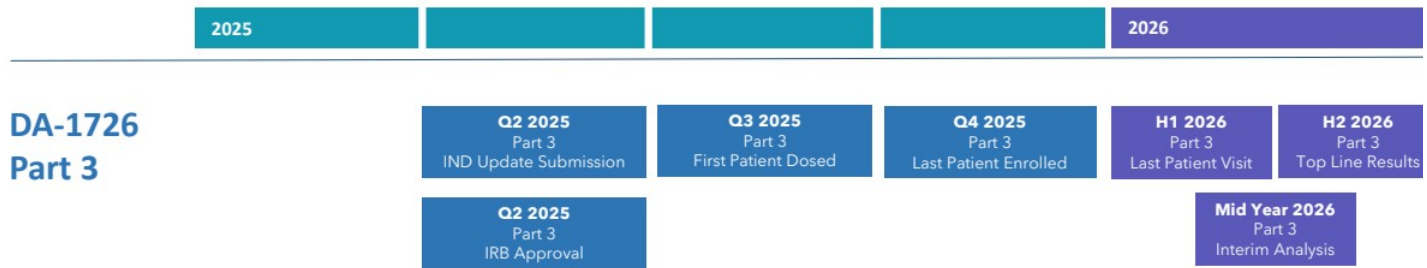
* These milestones assume regulatory and clinical success, which is not guaranteed



DA-1726: Upcoming Phase 1 Part 3 Trial in Obesity Timeline



Phase 1 Part 3 will assess total weight loss at 24 weeks, exploring maximum titratable dose and dietary changes.



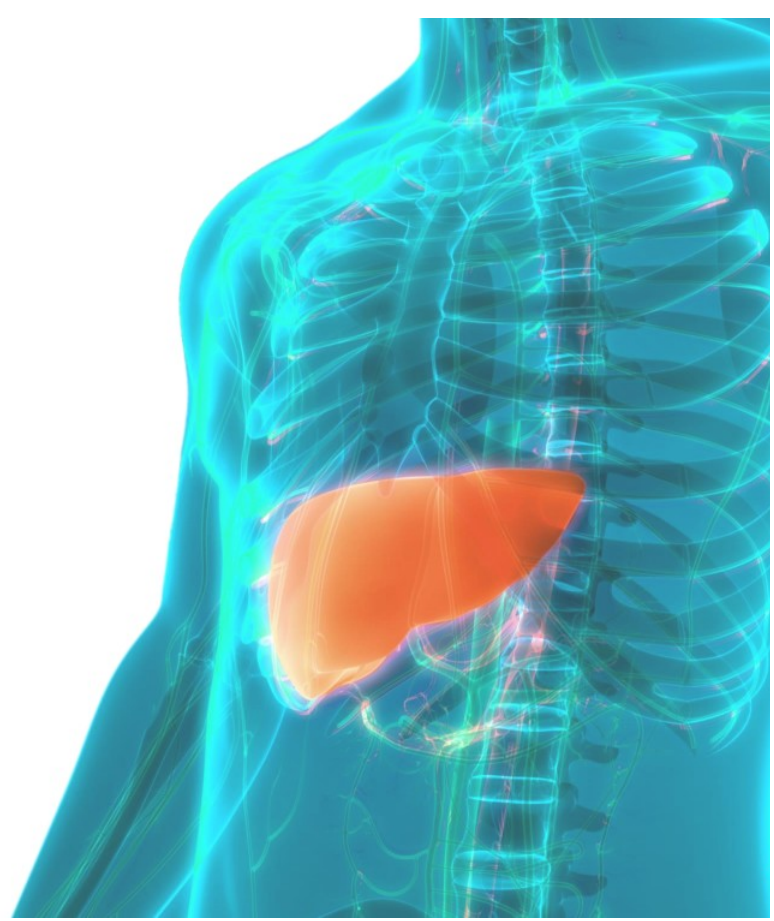
DA-1726 Part 3

* These milestones assume regulatory and clinical success, which is not guaranteed

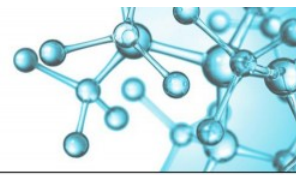




Investment Thesis



Compelling Investment Opportunity



Targeting **Obesity and MASH** with a Pipeline of **Next Generation Therapeutics**

- Aiming to increase Shareholder Value through *Multiple, Near-Term, Value Creating Milestones*
 - **DA-1726**
 - ✓ Ongoing Phase 1 trial for the treatment of obesity
 - Part 1 (SAD) data readout expected in Q3 2024 and Part 2 (MAD) data readout in Q1 2025
 - **DA-1241**
 - ✓ Ongoing Phase 2a in subjects with presumed MASH
 - Top-line data readout expected in Q4 2024
- Backed by Strategic Partner and Major Shareholder, Dong-A ST
- Well capitalized with approximately *\$16 million in Cash at the end of Q1 2024* – not including aggregate gross proceeds received of \$20 million at the closing of a June 2024 equity financing. Additional \$50 million in aggregate gross proceeds may be received if all milestone-based warrants are fully exercised.



Thank You!

Investor Contacts:

Rx Communications Group

Michael Miller

+1 917.633.6086

mmiller@rxir.com

NeuroBo Pharmaceuticals

Marshall Woodworth

+1 919.749.8748

marshall.woodworth@neurobopharma.com

